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A case study of technical and vocational education in Turkey

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Abstract

The primary purposes of this paper were to provide data and information about the education system in respect to the responsiveness of vocational and technical teacher education in Turkey. The wide extant research literature and a survey of institutional members of the Higher Education Council and Ministry of education on Vocational Education provided the primary sources for the paper. Further, there is little consensus on the theoretical framework for subject matter and related pedagogy for preparing 21st Century teachers to teach in vocational and technical education. Beginning teachers are being made aware of such major initiatives as integration of academic and vocational education, school-to-work transition, and special populations. However, a solid theory and research base and the related connections with practice to undergird the initiatives and to bring about long-term, systemic change is probably not being provided at most colleges or universities. The capacity of vocational high schools and universities to produce teachers who are prepared to teach effectively all work-bound students for employment for the 21st Century workplace needs to be rebuilt.

Keywords: Technical and vocational education; teachers; teaching quality.

1. Introduction

In the 21st Century, in the western world, the use and production of the knowledge and technology for manufacturing industry have a great importance for both national and international competitiveness. In the developed countries, improving the job skills of the work force has been a cornerstone of economic development theory and practice and has received more international assistance than any other form or level of the education. The reason of this might be the today's world, is changing fast both economically and socially. While global competition is not perfect is all ways, for example free trade has not yet equated to fair trade, competition for ideas has never been stronger. A principal question that countries ask themselves is no longer what industrial resources one has, but how well educated is the workforce. Accordingly, what used to be a divide between countries based on their income level, has now also become a divide between societies based on their educational qualifications. The countries with the highest education levels now lead the world in living standards (Vorkink, 2006). Therefore, the education

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becomes a significant value for countries. It is important to look at what is meant and how education should be in the 21st Century.

Figure 1. Demand for workers in the 21st Century (Worldbank, 2007)

One of the most important changes globally is that employers are demanding new and different types of skills from their workers today than they were in the past. According to the Worldbank report (2007), over the past twenty-five years the kinds of skills that are needed in the workplace have been evolving from simple to more complexes in the United States. It shows how technology and globalization have changed what employers expect of their new workers. It measures the changes in skill requirements demanded of new employees. The figure displays the trend for each of five main types of tasks. Expert thinking rapidly increasing: solving problems for which there are no rule-based solutions, such as research skills, scientific thinking, and diagnostic skills. Complex communication rapidly increasing: interacting with others to acquire information, explain it, or to persuade others of its implications for action, such as persuasive writing, personnel management, legal writing, advertising and marketing, and sales.

The demand for workers in the 21st Century could be the reason that an international commission of experts headed by Jacques Delors was set up by the UNESCO to look into this very question. It drew up an influential report with the following title: "Learning: The Treasure Within". Resting on four pillars, this report outlines a comprehensive understanding of the term education (UNESCO, 1997).

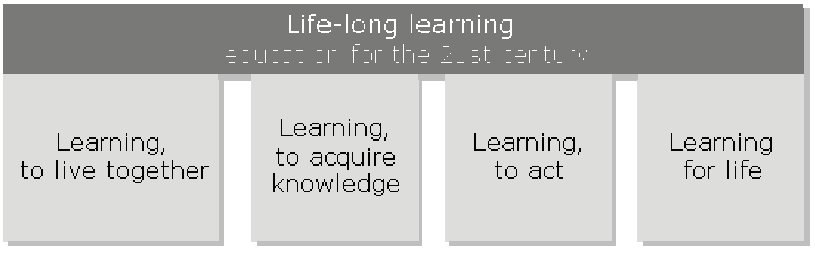


Figure 2. Life-Long Learning (UNESCO Report, 1997)

The idea of life-long learning is one of the keys to the 21st century. The only way of dealing with this issue is by teaching people how to learn. Another need also exists. The far-reaching changes that are affecting traditional living patterns means that it is essential that we learn how to better understand other people and the world as a whole.

According to the report of UNESCO (1997), the Commission embraces this concept and wants to emphasize the importance of one of the four pillars, which it saw as providing a framework on which education should be based. This, the first pillar, is *Learning to live together* which involves developing an understanding for fellow people, for their history, traditions and spiritual values. This pillar enables people to develop a new awareness which - based on an understanding of our growing interdependence and a joint analysis of future risks and challenges - leads people

into carrying out joint projects and solving insurmountable conflicts in an intelligent and peaceful way. The Commission drives up an understanding of what sort of education is needed to create and consolidate this new kind of awareness. And it is here that the significance of the other three pillars comes to the fore, given that it is these that provide the basis for learning how to live together.

The second pillar is *learning how to acquire knowledge.* Against a background in which technological changes come thick and fast and in which new economic and social patterns form, the main focus is on making sure that general education is as wide as possible and that people can go on to deepen their knowledge in selected subjects. Indeed, this kind of general education is the key to a life-long process of learning. It whets people's appetite to learn over a lifetime - while at the same time providing the foundations to do so. The third pillar is *learning to how to act.* This pillar is not just about doing a job but, in general terms, about acquiring the skills to cope with different and often unforeseen situations and about learning how to work in a team. Indeed, it is these characteristics that current educational methods tend to neglect. In many cases, it is easer for pupils and students to learn these competencies if they are given the opportunity to try out and develop their skills. It's about enabling people to get work experience and community work while they are still in education. Indeed, a great deal of importance should be attached to all methods that mix education with experience.

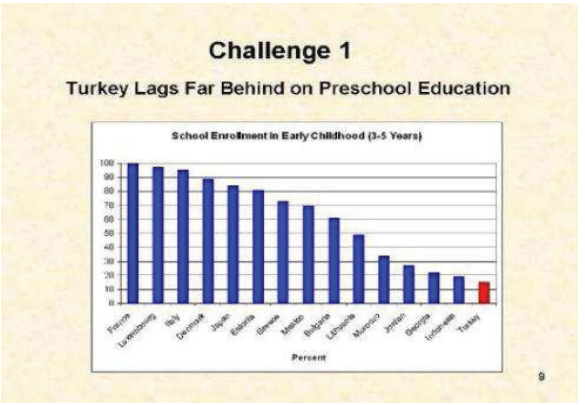
The last pillar is *learning for life.* This was the issue at the heart of the Edgar-Faure report called *how we learn to live,* which was part of the UNESCO report on the objectives and future of our education programs, published in 1972 by UNESCO. The recommendations of this report are still relevant today. Indeed, in the 21st century everyone will be required to demonstrate independence, judgment and more personal responsibility if common objectives are to be reached. The report of UNESCO (1997) also underlines another requirement, namely that none of the talents lying dormant like hidden treasures in every individual should be allowed to go unused. These talents, to name but a few, include: memory, logical thought, imagination, physical ability, an aesthetic sense, the ability to communicate and the natural charisma of a group leader. In actual fact these abilities only serve in underlining the importance of more self-knowledge.

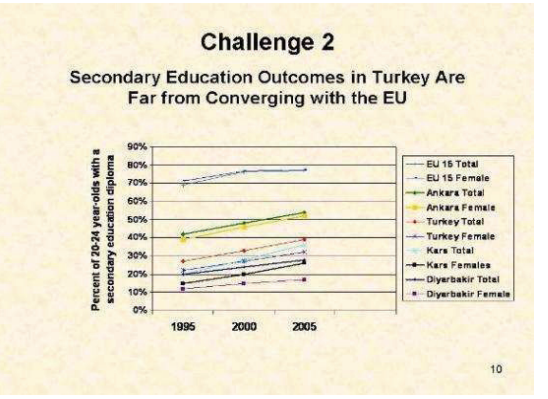
2. The Turkish Education System and Challenges

The Turkish education system comprises three main structures: pre-school education; basic education; and general secondary education and vocational secondary education. These include both public and private educational institutions according to the Basic Law on National Education No.1739. the Ministry of National Education (MONE) which is responsible for the services concerned consists of two main organizational structures: central and provincial. The administrative structure of the Ministry is centralized, like other public institutions in Turkey. However, regulations have been made recently to delegate authority on some topics to provincial directorates of national education, and this administrative approach is becoming increasingly prevalent. Within this system, guidance services and special education services are organized under the General Directorate for Special Education, Guidance and Counseling Services (MONE, 2001). The program structure of the Turkish education system has been criticized on the grounds that its lack of flexibility and its being heavily content -based make it difficult to address the individual interests and talents of students. Accordingly, in its 2001-05 Operational Program, MONE has made provision for arranging more flexible and student-based vertical and horizontal transfers between general and vocational/technical secondary education programs and for developing career orientation and guidance services (Akkok and Watts, 2003).

Further problems about educational system can be identified in Turkey which faces in integrating with the European Union and looks for reforms, may be necessary for Turkey’s education system to catch up with Europe and produces an education system that produces workers who can compete in a rapidly changing world. The global and the European challenge is to create a stronger education system which produces higher skills among graduates who can function in an increasingly complex and competitive labor market. This is obviously the same challenge that Turkey faces (Vorkink, 2006 and OECD, 2008).

The first challenge for Turkey is the very low number of children who attend pre-school in comparison with other countries of similar income level, let alone EU member states. Studies elsewhere, confirmed in Turkey, show that the pre-school attendance has an impact later in life on important factors such as literacy, health, intelligence, subsequent education obtainment and employment and even income levels (OECD, 2008).

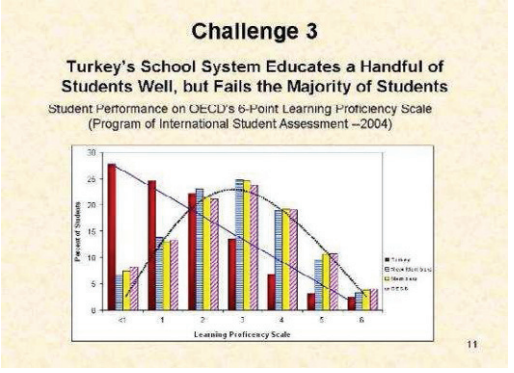


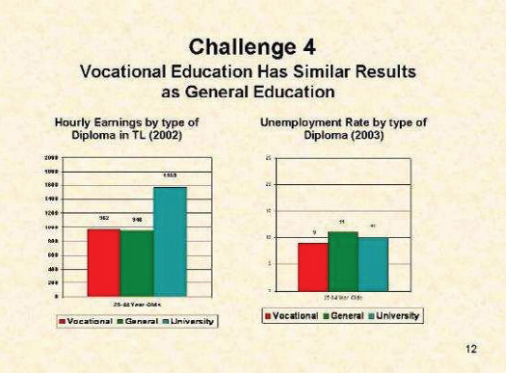


OECD, 2008

The second challenge is the low level of secondary school graduates in Turkey and the educational differences with Europe. Turkey has made very significant progress on the path to universal basic education, bringing net enrollments at the basic education level from 80% to 90% in less than 8 years. On secondary education, however, the picture has not been as successful. There is in fact a long road ahead for Turkey to achieve the EU target of 85 percent of 22-year-olds with a complete secondary education, especially for girls (OECD, 2008, UNICEF, 2007).

Another major challenge Turkey faces is creating a high level of learning for a larger number of students. OECD countries have collaborated in the development of the PISA (Program of International Student Assessment) to measure what students know and are able to do by they type they complete their compulsory education, which is considered to be 15 years-old for the purposes of international comparison. The PISA study report published in December 2004 shows that 52.3 percent of 15 year-olds in Turkey cannot achieve beyond level 1 on a six point scale of learning competency. This is compared to only 16.6 percent of students in EU countries. The straight line on the above slide shows how Turkey's scores differs so dramatically from countries it is competing with and EU members it wishes to join.





OECD, 2008

Turkey's fourth challenge concerns its vocational education system – which has more than 1.1 million students of the approximately 3 million students at the secondary level. Many may assume that vocational schools produce secondary school graduates that the labor market demands, but the facts do not support this. Today, young vocational school graduates earn about the same as the general secondary graduates (the general graduates who do not continue to the university), and they are not significantly more likely to be employed. Earnings for university graduates are much higher, which of course is why so many young people try to enter the university. But there are not enough university places to match the demand. In fact, only about 1/3 of students who wish to enter universities in Turkey can find places (OSYM, 2008). For many years, the Government has pursued policies to reduce the high level of demand on universities, such as by providing some limited incentives to study vocational education (for

example, admission to Professional High Colleges in the same field), but this has not worked as vocational enrollments have not increased. The challenge for Turkey is to provide all students, in vocational and general schools alike, the opportunity to learn the core academic competencies that would prepare them for university entrance and university studies. In this way, the Government could use the "fair chance" of university entrance to motivate all students (including vocational) to work hard at the secondary level to learn the core academic competencies at the highest standards. A parallel challenge would be to provide students in general secondary schools the opportunity to learn applied skills, given that not all of them will attain university admission in view of the limited number of places in universities.

Turkey's fifth challenge is about what kind of system best measures performance across secondary school students so that they can be assessed for entry into university. Unfortunately, the current system of the ÖSS exam, while of the highest integrity and transparency, is more appropriate for a different kind of education system. In particular, it is not well suited to Turkey's future needs and to the objective of improving the competencies of all students. As currently designed – though changes are being considered - the ÖSS drives down the quality of teaching and learning because it tests an extremely narrow range of the curriculum, tests only the kind of learning that which can be assessed with multiple-choice items, and tests quickly in a one-sitting, short exam. In addition, entrance and selection exams like the ÖSS are not designed to assess the performance of schools against curriculum requirements or to identify students who need additional assistance from their teachers, so that a school may better meet its performance targets. Finally, the ÖSS exam does not provide feedback to schools or teachers on performance because knowledge learned at school is not tested.

Instead of policies that stimulate the growth of the test preparation industry, many other countries have policies that stimulate the private sector to provide private schooling (which is relatively rare in Turkey) at all levels of education by permitting private school educators broad flexibility in how they manage their schools, organize instruction, and select their students. Compared with Europe and most of the world, Turkey's public schools have the least autonomy over resources, staff deployment (at the school), textbook selection, allocation of instructional time, and selection of programs offered. Without any autonomy, schools cannot be held accountable for their results, nor do schools have the incentive to improve quality. On the other hand, the central authority, which controls and determines the allocation of nearly all of the resources in the sector, has not succeeded in assuring between-school equity, which is a proper function of the center.

3. Vocational and Technical Education (VTE) and Teachers Training

Global experience shows that the single largest factor in education quality is the quality of teachers. Simply put, better teachers mean better students, better skills and better employment. The current education system in Turkey does not adequately support teachers or raise teacher quality to the levels needed to produce better students. Research shows that teachers need intensive training and continuous support to change their teaching practices in line with updated curriculum and learning expectations. Initial teacher education, in particular, would need to be redesigned to support the new expectations and requirements of teachers. But initial teacher education is one area over which the Ministry of National Education (MONE) has very little influence. One of the contradictory aspects of the Turkish education system is that while MONE has comprehensive authority over most of the determinants of teaching and learning (i.e., curriculum, educational materials, teacher assignment, school facilities, equipment, and oversight), it does not control the most critical input in the system: human resources. Specifically, MONE does not control the selection of individuals into teacher education programs at the university (the ÖSS does), their academic preparation (YÖK and the university does), or their entrance into professions (the Civil Service examination does).

In many arguments of the international reports (OECD, 2008 Eurostat, 2003, and UNESCO, 1997), learning does not stop on exit from school. According to the summary of those reports, in a rapidly changing labor market and knowledge economies workers must be able to continually to update and improve their competences and qualifications**,** and make use of the widest possible range of learning settings. The Brussels European Council report of October 2003 highlighted that the development of human capital is a prerequisite for the promotion of growth in the EU, notably through increased investment in education and a better integration with social policies and employment. Similarly, the employment guidelines adopted by the European Council in June 2003 placed emphasis on the development of human capital through lifelong learning. An analysis reported in a follow-up to the European Council's 2003 Resolution on Lifelong Learning corroborates the progress made in the EU Member States. The EU target of a 12.5% rate of adult participation in further education and training has been basically achieved on average, but some countries, such as the UK, are well ahead of the average. The EU's Eurostat Database reports find that the

workforce in Turkey barely participate at all in lifelong learning, and growth in opportunities has been negligible. This is another challenge, to keep Turkey's workforce up to date with the changing skills demanded by employers.

It has been said that an educated workforce is the one remaining asset which a country has to compete with other countries. Unemployment figures indicate that Turkey's schools and universities may not be preparing youth adequately for this challenge. In particular, there appears to be a huge mismatch between the skills that graduates have and the skills the labor market is demanding. This is certainly one of the main reasons for the high unemployment of new secondary and university graduates. In respect to the studies on vocational and technical training (Volmari, 2004; Yıldırım and Altın, 2004; Altıparmak, 2004; Sezgin, 2004; Yücesi and Bay, 2004); it can be seen that there is no similar one within the developed states' models with the vocational and technical training, performed within Turkey. In connection with this argument, there are also academic studies, which suggest requirement of closing Technical Training Faculties, which are four year faculties, and turning these educational institutions into Technology Faculties (Altıparmak, 2004; Yücesu and Bay 2004). On the other hand, teacher training professors and their training problems are drawing interests of researchers among the basic problems of higher education. This problem is continuously being inspected with its quality and quantity aspects (Erginer and Dursun, 2005) and this issue, which is being discussed from time to time with their aspects, composed of different problems, is the other technical problem aspect of the issue. When corresponding literature is considered, the issue of developing effective teaching skills of professors, who are working in universities, was first put into agenda during 3rd National Education Convention (MEB, 1946); "All the ones, who shall teach in higher education institutions, should have the prerequisite of passing from teachers' professional information programs" and this is followed by "Application of programs, causing various professors to gain pedagogical formation, and especially weighting common and private teaching methods is found appropriate" of 11th National Education Convention (MEB, 1982), and quality of current training system shall only be improved with qualified teachers. According to Alkan (1984), appearance of this situation on international level is not too different.

In respect to the related Laws with higher education, (Official Gazette, 1981), it is obvious that training and research functionalities have two concepts, which can not be separated from each other and showing a wholeness. According to the results of other researches, performed related with training qualified teachers, performed in connection with education qualifications of the professors of faculty of education; it is concluded that professors are finding themselves qualified in connection with their educations but this thought is not being shared with their students (Cinar ve at. 2007, Yüksel, 2004; Türkoğlu, 1993; Bayram, 1992; Bolat, 1990; Deryakulu, 1992; Erdoğan, 1990; Erginer, 1997; Gömleksiz, 1998; Gözütok, 1988; Kavak, 1986; Küçükahmet, 1976;). In the studies of Ulusavaş and Nas (1990), 43 % of the professors, who are working in a teacher training institution, are not teacher based professors. But, although it is described as "Special care should be shown for professors, who shall work within Teacher Training higher education institutions, should have qualifications, which shall be an example for teacher candidates in connection with academic formation, personality and behavioral characteristics (MEB, 1989: 292", an interesting situation is existing between current structure and regulations. Other researchers, who are discussing this subject, (Alkan and Hacıoğlu, 1995) are in a consensus on requirement of training qualified professors.

As discussed earlier, there are number of problems about educational system in Turkey which faces in integrating with the European Union and looks for reforms, may be necessary for Turkey's education system to catch up with Europe and produces an education system that produces workers who can compete in a rapidly changing world. Within the global competition to catch up with the developed countries, the main problem of the Turkish Vocational and Technical education is that there is no any similar education system which raises students to the industrial world. In this case, VTE must be accredited by looking at the Technology Faculties in United States, Art and Design Faculties in the United Kingdom, and Applied Science Faculties in Germany. Therefore, a number of reforms should be carried out for accreditation.

Turkey is planning on a ten year horizon for EU membership. It is possible to argue that neither the education sector nor the labor markets are currently ready for EU integration. Turkey can, however, undertake basic reforms in education which could vastly improve education quality and the skills of graduates from Turkish schools at all levels. Since education reforms take time to take effect, it is essential that Turkey launch a major reform program now so that in ten years time the education sector looks very different than it does now. This will require reforms in many areas under an overall reform strategy. But this strategy must be comprehensive at all levels of education and not try to tackle the problems which Turkey has in a piecemeal way of a little change here and a little change there. Nor can institutions in Turkey by themselves undertake reform without the agreement of other institutions, the public, the private sector and government. The following statement by Vorkink (2006) is very important:

> "Everyone in Turkey I speak with mentions that Turkey needs to improve education but there is often fierce debate on where to start and what parts of the system need to be changed. Plus, much of the debate in Turkey today about education is about highly emotional issues and not about the real issue – quality of students and education institutions. In my view, education change is needed but such change can only occur if there is a national consensus among all affected parties that reforms are needed for the benefit of EU integration, the nation and the nation's students. Such consensus needs to focus in the national interest on quality, equity, all levels of education, be financed over multiple years and be widely owned within Turkey" [Vorkink, 2006, pp18].

However, according to Vorking 2006, Turkey could become a European Tiger if undertakes the right policy reforms and investments. He claims:

> "I would like to use today's presentation to highlight the education sector reforms that Turkey may consider to accelerate its transformation into a European Tiger. **Of all the reforms** facing Turkey, education is probably the one area in which Turkey faces its greatest challenges, and its greatest opportunities [Vorkink, 2006, pp16].

4. Conclusions and Recommendations

The existing system has served its purpose and major changes to be able to allow graduates of schools to compete in the much more competitive world which now exists in Turkey and in Europe. It is time to consider a major structural change in Turkey's education system to meet the challenges of European integration and globalization and to bring higher quality to Turkish education and to bring better educational and employment opportunities for all students in Turkey. Turkey's education community has begun to make the shift to this approach, as evidenced by the Government's participation in international studies, its comprehensive curriculum modernization proposals, and the growing involvement of non-government organizations in promoting education reform and quality improvements.

Compared with Europe and most of the world, Turkey's public schools have the least autonomy over resources, staff deployment (at the school), textbook selection, allocation of instructional time, and selection of programs offered. Without any autonomy, schools cannot be held accountable for their results, nor do schools have the incentive to improve quality. Particularly, the capacity of vocational high schools and universities to produce teachers who are prepared to teach effectively all work-bound students for employment for the 21st Century workplace needs to be rebuilt. This includes determining the appropriate knowledge base for vocational and technical education teachers, core curriculum, minimal standards, new models of delivery, pedagogy, connections with practice, relationships necessary with academic and subject matter faculty and programs, and research and evaluation. In this case, the faculties of Technical Education should be rebuilt and accredited by looking at similar activities carried out in the faculties such as the Technology Faculties in United States, Art and Design Faculties in the United Kingdom, and Applied Science Faculties in Germany.

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